



SURG 244 Pharmacology and Anesthesia section name section credit hours
Credits
Syllabus

Course Information

Meeting times and location: section meeting_times section location

Catalog description: This course is designed to introduce students to most commonly used pharmacological agents utilized for surgical patients in each phase of the perioperative experience and those utilized in the treatment of complications and emergencies. Emphasis is placed on preoperative medications, anesthetics and medications utilized within the sterile field stressing identification, preparation, measurements, management within the sterile field, handling/transfer, and usage. Other topics include pain management, airway and respiratory management, IV fluid and electrolyte replacement therapy, and a comparison of the types of anesthesia, physiological effects, complications and treatment.

Prerequisites: Take SURG-229, SURG-230, SURG-233, SURG-234, SURG-235;

Terms offered: Fall and Spring

Section-specific Course Description:

Course Level Objectives

This course introduces students to the ethics, language, techniques and instrumentation in the profession of Surgical Assisting. At the end of this course, students will be able to:

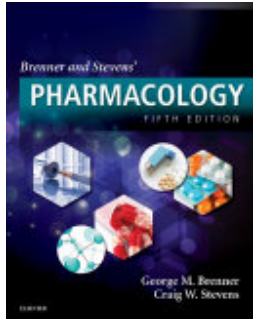
1. Discuss the two main subdivisions of Pharmacology.
2. Compare the mechanisms of drug action and dose response relationship.
3. List the sources of drugs.
4. Identify the primary routes of administrations, and topical administration produces a localized effect at the site of administration.

5. Explain the passive diffusion across cell membranes or between cells.
6. Review Drug metabolism and its phases.
7. Understand a loading dose calculation.
8. Identify a drug's ability to initiate a response and Agonists.
9. Compare and Contrast Competitive and Noncompetitive antagonists.
10. Explain the process of drug development.
11. Discuss the FDA regulations, manufacturing and the Controlled Substance Act.
12. Classify toxic agents and treatment drugs.
13. Discuss Drugs that alter nervous system function affecting neurotransmitters or receptors.
14. Review the pharmacological properties, clinical use and adverse effects.
15. Classify Adrenoceptors Agonists and effects on different body systems.
16. List the four classes of antihypertensive drugs.
17. Discuss angiotensin and ACE inhibitors.
18. Review the benefits of and Antianginal drug Vasodilators.
19. Understand drug for Heart Failure.
20. Identify diuretics inhibition of reabsorption of sodium from the nephron.
21. Describe the Pathophysiology of dysrhythmias and mechanisms maintaining normal sinus rhythm.
22. Review the lifestyle changes and drug therapy reducing, reoccurrence of coronary artery disease.
23. Identify Drugs used in the prevention and treatment of thromboembolic disorders.
24. Describe Pharmacologic properties and uses of minerals, vitamins, and hematopoietic growth factors.
25. Review general mechanisms by which drugs alter CNS activities and processes.
26. Describe the pharmacologic properties of Benzodiazepines, Barbiturates, and other sedative-hypnotic and anxiolytic drugs.
27. Discuss Seizures and Antiepileptic drugs.
28. Analyze Local and General Anesthetics.
29. Identify the relief of pain by opioid, and the neural pathways in the CNS.
30. Discuss the drug treatment for Neurodegenerative diseases.
31. Explain medical, legal and social problems of drug abuse.
32. Review autacoids and drugs that influence their effects.
33. Discuss Pharmacology and clinical use of drug for common respiratory conditions.
34. Describe drugs used in the management of gastrointestinal disease.
35. Discuss the drugs for headache disorders.
36. Describe the pharmacologic properties of nonsteroidal anti-inflammatory drugs.
37. Identify the Principles of Antimicrobial Chemotherapy.
38. Discuss classes of antibacterial drugs used in treating infections.
39. Understand the drug use to treat Tuberculosis Mycobacterium.
40. Review Antifungal drugs and treatment of infections.

41. Discuss the common usage of Antiviral drugs.
42. Discuss the commonly used antiparasitic agents and treatment of infections.
43. Classify Anticancer and Immunomodulating drugs.

Summarize the specific uses of antibiotics. *

Required Texts and/or Materials



Brenner and Stevens' Pharmacology E-Book

9780323391726

George M. Brenner, Craig W. Stevens

Elsevier Health Sciences

2017-09-28



Brenner and Stevens' Pharmacology E-Book

9780323391726

George M. Brenner, Craig W. Stevens

Elsevier Health Sciences

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Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

Technical Support

Technical support is available through the San Juan College Help Desk 24/7/365. The help desk can be reached at 505-566-3266 or by creating a ticket at [San Juan College Help Desk](#).

For tickets and password reset: [San Juan College Help Desk](#)

For Canvas support information: [Canvas Support](#)

Accessibility/Privacy Policies for all Technology Tools Used

[Accessibility/Privacy Policies for all Technology Tools Used](#)

Course Requirements

Students will do the following activities:

1. Have required textbooks and workbooks, packets, lab supplies listed under required textbooks.
2. Complete and submit written assignments by announced due dates.
3. Take all examinations and quizzes on the dates administered. Make up exams will be given only under certain circumstances with a reduction in the grade by 10%.
4. Practice procedures and perform demonstrations satisfactorily.
5. Participate in class and lab discussions and activities.
6. Maintain proper appearance and professional dress.
7. Maintain professional behavior
8. Meet specific objectives for each laboratory experience consistently.
9. Follow safety procedures and guidelines.

Read and verify understanding of San Juan College, Surgical First Assist Student Handbook.

COVID Safe Practices for Being on Campus

Masks / cloth face coverings must be worn while on campus in accordance with the New Mexico public health order. If you feel that you cannot wear a mask due to health complications, please contact Disabilities Services:

disabilityservices@sanjuancollege.edu or call (505) 566-3271. Hand sanitizer stations are at all building entrances, please “wash in, wash out”--clean your hands when you enter and before you leave. Classrooms and labs have been arranged to allow for social distancing; please respect your classmates and instructors by staying 6 feet away from everyone. You will be expected to disinfect your table or area prior to class and after class, cleaning products will be provided for this purpose. Check with your instructor for specific policies for their course. Please do not congregate in hallways or common areas, instead utilize our beautiful outside spaces and weather to visit with your friends and colleagues from a safe distance.

If you have been in contact with anyone who has tested positive for COVID-19, has symptoms, or is waiting on test results, contact your instructor and DO NOT come to class. If you have tested positive, have symptoms or are waiting on test results, contact your instructor and DO NOT come to class. Your health care provider or the assigned contact tracer will let you know when it is safe for you to be around others.

Student Support

Student Services and Support

The Student Support webpage provides information on counseling, tutoring, technical support, and many other support services available to San Juan College students.

[Student Support](#)

Academic Support

Academic Support webpage provides information on academic advising, the library, Testing Center, and the honors program.

[Academic Support](#)

Participation and Attendance Policy

1. Attendance to didactic and lab is an integral part of student learning. When a student misses more than three days of didactic and lab then this interferes with the student's ability to understand the material. Attendance will be documented thoroughly and if a student has an unexcused absence then this could adversely affect the grade for the course.

2. Tardy attendance is disruptive not only to the instructor, but to peers. Please be ready to begin class at the designated time

1 Unexcused Absence-----Counseling

2 Unexcused Absences-----Verbal Warning

3 Unexcused Absences-----Written Warning

After 3 Unexcused Absences Student Will Be Dropped From Course

Other Classroom Policies and Expectations

Students are expected to conduct themselves in an ethical and professional manner at all times. All academic assignments, including papers, tests, or other assignments, are to be the work of the individual student. The following are examples of unethical or

unprofessional behavior:

- Plagiarism
- Unprofessional behavior in communication with faculty and staff
- Completing an assignment for another student in part or in whole

Consequences

Any student who acts in an unethical manner will receive a failing grade. Any second academic incident or unprofessional communication with staff or faculty can result in administrative termination from the Institute. Students who were withdrawn due to poor student conduct may not be reconsidered to re-enroll.

Canvas Participation and Expectations

Because assignments and notifications are posted in Canvas, you should check into Canvas daily Monday-Friday. Majority of communications will be through Canvas email unless otherwise specified.

Instructor Response Time

Students I will answer email and phone calls daily (Monday-Friday) but expect that in some circumstances it may take up to 72 hours to get a response. Scheduled assignments will be graded by the end of each week.

Course Time Commitment

Students should expect to spend 18-24 hours or more per week for course work of class to be successful in this program.

Grading

Final grades are calculated based on the following...

Here is a sample of one formatting option:

What does it mean to weight a grade? When grades are weighted, some assignments (e.g. Final Exam) or categories of assignments (e.g. Quizzes) count more than others. Why not just assign more points to the things that are harder? In a perfect world this would work. However, there is far more flexibility in weighting grades. If an instructor decides that quizzes should make up 25% of the total points in a course, it doesn't matter whether there is 1 quiz, 5 quizzes or, heaven forbid, 50 quizzes. The total points earned for the quizzes still makes up 25% of the final grade. If an instructor decides to

increase or decrease the workload based on the particular needs of any group of students, weighted grades make that easy. In a scenario where grades are weighted by category and the number of assignments in a category changes, no changes to the course points or course guide would be necessary. If, on the other hand, the point system was used, and a change to the course assignments is needed, the total points for the class would change and the course guide would need to be updated.

How are the points for a weighted item calculated? Multiply each score over the total points possible by the weight. For example, the midterm is worth 100 points. If you earned 90/100 the calculation would be $.25(90/100) = .225$. Expressed as a percent, you earned 22.5%

Grading Scale:

A = 90% or higher

B = 80-89

C = 70-79

D = 60-69

F = 59 or below.

Key Dates to Remember

[Full Academic Calendar](#)

Course Schedule

Assignments & Academic Calendar

DAY	Topic/Content	SSCC
<p>Week 1 Chapter 1-5</p>	<p>Lecture Video Canvas Read Chapter 1-5 Chapter 1 Introduction to Pharmacology Chapter 2 Pharmacokinetics Chapter 3 Pharmacodynamics Chapter 4 Drug Development and Safety Chapter 5 Toxicology and the Treatment of Poisoning Discussion Quiz Chapters 1-5 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Discuss Drug absorption, distribution, metabolism, and excretion. 2. Review Pharmacokinetics, single dose, continuous dose, and multiple dose. 3. Identify the nature of drug receptors. 4. Review receptor interactions, and dose response relationships. 5. Discuss Drug Development, Laws and Regulations. 6. Review Adverse effects, interactions of drugs. 7. Identify factors affecting drug safety and efficacy. 8. Discuss Toxicology and the treatment of poisoning. 	
<p>Week2 Chapter 6-9</p>	<p>Lecture Video Canvas Read Chapter 6-9 Chapter 6 Peripheral Neuropharmacology and Acetylcholine agonists Chapter 7 Acetylcholine Receptor Antagonists Chapter 8 Sympathetic Neurotransmission and Adrenoceptor Agonists. Chapter 9 Adrenoceptor Antagonists Quiz Chapter 6-9 Open Thursday 11:59 Close Sunday 11:59 Drug Research Paper Assigned</p> <ol style="list-style-type: none"> 1. Review anatomy and physiology of the Peripheral Nervous System, and neurotransmission sites. 2. Discuss Acetylcholine Receptors, and Agonists. 3. Discuss Muscarinic receptor antagonists. 	

	<p>4. Review drug affecting adrenergic neurotransmission.</p> <p>5. Classify Alpha-Adrenoceptor/ Beta-Adrenoceptor antagonists</p>	
<p>Week 3 Chapter 10-17</p>	<p>Lecture Video Canvas</p> <p>Read Chapter 10, 11, 16, 17</p> <p>Chapter 10 Antihypertensive Drugs</p> <p>Chapter 11 Antianginal Drug</p> <p>Chapter 16 Antithrombotic and Thrombolytic Drugs</p> <p>Chapter 17 Hematopoietic Drugs.</p> <p>Quiz Chapter 10, 11, 16, 17 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Discuss Hypertension, sympatholytic drugs, and vasodilators. 2. Review Mechanisms and effects of Antianginal drugs. 3. Discuss anticoagulant, antiplatelet drugs prevention and treatment of thromboembolic disorders. 4. Describe the pharmacologic properties and uses of minerals, vitamins and hematopoietic growth factors. 	
<p>Week 4 Chapter 19-25</p>	<p>Lecture Video Canvas</p> <p>Read Chapters 19, 21-23, 25</p> <p>Chapter 19 Sedative-Hypnotic and Anxiolytic Drugs</p> <p>Chapter 21 Local and General Anesthetics</p> <p>Chapter 22 Psychotherapeutic Drugs</p> <p>Chapter 23 Opioid Analgesics and Antagonists</p> <p>Chapter 25 Drug Abuse</p> <p>Quiz Chapter 19, 21-23, 25 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Review general anesthetics during surgery, and local anesthetics ester and amide types. 2. Discuss Schizophrenia and Antipsychotic drugs. 3. Identify Pain use of opioid analgesics, and Analgesic agents. 4. Review Drug abuse, depressants, and stimulants 	<p>APPPM</p>
<p>Week 5 Chapter 26-30</p>	<p>Lecture Canvas</p> <p>Read Chapters 30, 37-38</p> <p>Chapter 30 Drugs for Pain, Inflammation and Arthritic Disorders</p>	<p>SICA</p>

	<p>Chapter 37 Principles of Antimicrobial Chemotherapy Chapter 38 Inhibitors of Bacterial Cell Wall Synthesis Quiz Chapters 30, 37-38 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Review the use of NSAIDs for RA, OA, Gout and pain. 2. Discuss antimicrobial chemotherapy drugs 3. Review Microbial sensitivity and resistance, and prophylactic therapy. 	
<p>Week 6 Chapters 37--40</p>	<p>Lecture Video Canvas Read Chapters 39-41 Chapter 39 Inhibitors of Bacterial Protein Synthesis Chapter 40 Quinolones, Antifolate Drugs, and Other Agents Chapter 41 Antimycobacterial Drugs</p> <p>Quiz Chapter 39-41 Open Thursday 11:59 Close Sunday 11:59 Drug Research Paper Due</p> <ol style="list-style-type: none"> 1. Discuss antibiotics that inhibit penicillin resistant bacteria. 2. Describe the sulfonamides and trimethoprim used in treating bacterial infections 3. Discuss the drugs used to treat tuberculosis and leprosy. 	SICA
<p>Week 7 Chapters 41-45</p>	<p>Lecture Video Canvas Read Chapter 42-45 Chapter 42 Antifungal Drugs Chapter 43 Antiviral Drugs Chapter 44 Antiparasitic Drugs Chapter 45 Anticancer and Immunomodulating Drugs Quiz Chapters 40-42 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Discuss fungal infections organisms, site of infection and treatments. 2. Compare drugs for herpesvirus infections, and drugs for HBV, HCV infections. 	SICA

	<p>3. Classify antiparasitic agents and treatment of these infections.</p> <p>4. Discuss principles of cancer therapy, and anticancer drugs.</p>	
Week 8 Finals	<p>Final 244 Cumulative Open Sunday 8am Close Wednesday 8am End surg 244</p>	

SCHEDULE IS SUBJECT TO CHANGE.

College Policies

The following information also applies to your work in this class. If you have special needs for campus emergency situations, please inform me immediately.

1. Academic Accommodations - American with Disabilities Act (ADA)

If you believe you need academic accommodations due to physical or learning disabilities, you are encouraged to inform them as soon as possible. The coordinator can work with you in verifying your disabilities and developing accommodation strategies. Please go to [Disability Services Office](#), click the button for "Request for Services" and complete all the steps.

You can also contact the college's disability coordinator in the Advising/Counseling Center at 566-3271 or disabilityservices@sanjuancollege.edu. More information is available on the website listed above.

2. The Family Educational Rights and Privacy Act (FERPA)

Your personal information and grade are confidential. Aside from routine reporting to the college required for this course, I will not share such information with anyone unless I have your permission.

3. Academic Honesty Rules

San Juan College expects all students to adhere to the [Academic Honesty Rules](#) as posted online. These are the official guidelines for all classes at San Juan College (July 2006).

4. Student Conduct Statement

College is preparation for professional opportunities, and professional conduct is expected in courses, including online classes, as well as any written communications, and interactions with members of the college community. As part of our learning community, students are expected to interact and communicate in a mature, respectful, thoughtful, and supportive manner. Students who

demonstrate disrespectful, hostile, belittling, bullying or other disruptive behavior will be subject to potential consequences and possible dismissal from the college. The college will take appropriate action when students demonstrate threatening behavior (to others or self). Students should refer to the Code of Conduct in the Student Handbook for additional information.

5. Student Safety

Keeping students safe is a priority, and part of that is ensuring that we have the ability to communicate emergency messages – whether for school closures due to weather or for more or urgent situations. Rave is San Juan College’s emergency messaging system. Through your SJC student email, you will automatically receive email messages, however, it is also vital that you receive text messages. In order to receive the messages, you must register in a simple process with [Rave](#). When registering, please make sure that your mobile status is “confirmed.”

The Department of Public Safety is available 24 hours per day. In an emergency, they can be accessed by calling 215-3091 or 566-3333.

In the event of an emergency, a Rave message will be sent, and depending on the situation, you will be instructed to do one of the following:

- Evacuate the building
- Shelter in place (Campus doors are locked, and operations continue as normal. During this situation, no one other than law enforcement is allowed in or out of the campus.)
- Lockdown (Campus doors are locked. All operations cease, and you should take cover in your immediate area. No one other than law enforcement is allowed in or out of the campus.)

6. Non-Discrimination, Sexual Harassment, and Retaliation.

San Juan College does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, genetic, veteran’s status, or on the basis of any other category protected under federal, state and local laws. If you have experienced sexual harassment, sexual assault, or any other form of protected class discrimination, we encourage you to make a report. If you report to a faculty member, she/he/they are obligated by policy to share knowledge, notice, and/or reports of harassment, discrimination, and/or retaliation with the Title IX Coordinator. These disclosures include but are not limited to reports of sexual assault, dating/domestic violence, and stalking. You may also make a confidential report to a SJC Counselor. Please refer to San Juan College’s [Title IX](#) site for further details.

San Juan College's Title IX Coordinator is Stacey Allen, Assistant Director of Human Resources/Equity, Diversity, and Inclusion Officer. The office is located at the Educational Services Center Building, 2nd Floor, Human Resources, Room 4243 at

(505) 566-3515 or allens@sanjuancollege.edu.

7. Drop for Non-Attendance and/or Non-Participation

Class Attendance and Participation Expectation:

Face-to-Face -- Students are expected to attend and participate in class regularly. Any student missing more than 10% of consecutive class time, (For example, in a regular 15-week class that meets twice a week, this equates to the student missing 3 consecutive classes) without consultation with the instructor may be considered as having abandoned the course.

On-line -- Students are expected to participate regularly and submit all course assignments, based on the course guide definition. A student who does not submit any assignments during a consecutive 10% of the course (1.5 weeks of a 15-week semester) without consulting the instructor, may be considered as having abandoned the course. Logging in does not meet the attendance standard.

Competency-Based Education Classes -- Students are expected to have regular and substantive interactions with their instructor and to actively work on course content. A student who has not submitted coursework, nor had substantive interactions with the instructor over a consecutive 10% of the term, without the instructor's prior approval, will be considered to have abandoned the competency progression. Last date of attendance will be recorded as the last date that coursework was submitted or that the student met with the instructor. For on-line learners, logging in does not meet the attendance standard.

8. Failure to Meet Class Participation Expectation:

Students who fail to meet participation expectations will have their last date of attendance recorded. This date will be used to recalculate any financial aid received/veteran's benefits received, and the student may be required to repay the institution/government. If the student does not drop the course, an 'X' grade will be recorded. An 'X' grade impacts the grade point average the same as an 'F'.

9. Grading Policies

Incomplete: Incomplete Grade Assignment ([Incomplete Grades Information](#))

The grade of I (Incomplete) is given for passing work that could not be completed during the semester because of circumstances beyond the student's control.

Ordinarily, the assignment of an I is given by the course instructor at the time final grades are due

In no case is an I grade to be used to avoid assignment of D or F grades for marginal or failing work or to require a student to enroll in the class the next semester because work was not completed on time. Circumstances warranting the issuance of an I grade must be beyond the student's control and must be documented on the appropriate form prior to approval.

I grades can be removed only during the subsequent 16 weeks from the end of term, or within the time limit set by the instructor. Removal of an I is accomplished by completing the work in a manner acceptable to the instructor. Re-enrollment in the course under the repeat option does not remove the prior grade of I. Students should not re-enroll for the course. An I not made up within 16 weeks or within the time limit set by the instructor will change to an F grade thereafter and cannot be changed by work completion.

10. **Grade Appeals**

The policy for grade appeals is in the Academic Catalog. ([Grade Appeal Policy](#))

Student Handbook

The Student Handbook provides information on Student support, student organizations, and San Juan College policies.

[Student Handbook](#)

Program Handbook

Provided upon Acceptance into Program